BULLETIN

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Conducting World Class Research **May-June 2015 Issue 18**

Visiting Professor, Major Events, Launching

Prof Tadashi Ariga at SWEP

12/06/2015 - Emeritus Prof Tadashi Ariga Professor and an experienced person in Joining Technology from Tokai University, Japan. He is an expert in brazing and soldering field more than 30 years. He has offered the technologies over through the years for University of Malaya. Professor Ariga has conducted collaborative research with AMMP Centre for technical support, lecture and supervision. He has published several articles on this subject. At SWEP Prof Tadashi Ariga were one of the speaker in Brazing Workshop in Fundamental and Defect of Brazed Joint. Prof Tadashi Ariga talks on about Defects in the brazing joints; Joint reliability depends on design, materials compatibility and working conditions of the brazed parts. The typical defects identified at brazing joints are void and incomplete brazing defects. Those defects were discussed in the session.

News in Pictures

ITEX 2015 - Dr. Sayuti explaining about CNC Machine to the judge. The ITEX 2015 was held at the KLCC Convention

EDM TRAINING - 30 Students from Sg. Buloh Vocational College came to UM for EDM

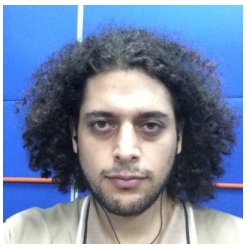
Prof Hamdi Career Talk

14/05/2015 - On the 14th of May 2015, Zecttron Sdn Bhd organized a career talk at Faculty of Build Environment. The speaker is Prof Hamdi and the talk last for about 3 hours with participant more than 70 people.

Research Highlights

Electrophoretic deposition of forsterite (Mg_2SiO_4) on titanium for biomedical applications

By MAHYAR AFSHAR.



Synopsis:

In the first phase of the work electrophoretic deposition of forsterite on titanium was done successfully which resulted in crackless uniform coatings. Also it was observed that heating the samples at elevated temperatures (~1000°C) resulted in formation of a titanium silicide interlayer between the coating and substrate and also growth of MgO nanowires out of forsterite coating due to heat-driven reactions between the titanium and forsterite.

Currently the effort is focused on improving the adhesion and cohesion of the coatings. One of the problems associated with electrophoretic deposition of ceramics on metallic substrates is the complications that arise during the sintering process. Ceramics typically require high sintering temperatures for densification while this temperature is limited when we are cofiring the ceramic-metal system. Reactions occurring between the metal and ceramic at high temperatures instigate severe decomposition of the coated layers.

So a compromise must be made between adhesion strength and chemical stability of the coated layers. Currently different parameters such as density of the coated layers and various sintering profiles are being investigated to

After optimizing the adhesion and cohesion of the coatings (examined by scratch testing method) the samples can be subjected to in-vitro cell culture studies.

Al-Qura'an Recital

AMMP Centre hosting a weekly Al-Qura'an recital. The recital were participated by both staff and board members of AMMP Centre.

Little Taiwan Restaurant - Social Event held at the restaurant with AMMP Centre staff as a farewell for interns session jan-may 2015.

Four students has reported to AMMP Centre for their Industrial Training. During the training, the students will be provided with a lots of knowledge and training related in maintaining the machines, software handling, system controlling and etc. Wish all the best to them.